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Hibury Madison & Suto LLP  
Intellectual Property Group  
Ninth Floor, East Tower  
100 New York Avenue, N.W.  
Washington, D.C. 20006 3918

Atty. Dkt. PMS 256628  
Att#                      Client Ref.                     

**ASSIGNMENT**  
**of U.S. Origin Patent Application**  
**(to Corporation)**  
**(or Limited Partnership)**

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628  
and entitled: Genetic Inhibition by Double-Stranded RNA  
for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;  
☒ was filed on December 18, 1998, Appln. No. 09/ 215, 257 ;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐  
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its  
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an  
Interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,  
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign  
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title  
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid  
application, and to the said application and to all continuations, divisions, reissues and substitutes of said  
application, together with the right of priority under the International Convention for the Protection of Industrial  
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other  
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and  
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,  
its successors, assigns and legal representatives.

PAT-1140 1107

TO 14016#568165002# P.01

JUL 02 2003 12:46 PM FR

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

**NOTE:** The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Signature

Date Signed

Witness

1) x Andrew Fire  
Name: Andrew Fire

x 1/15/99

Stephen L. Engle  
Linda A. Henry

2) \_\_\_\_\_  
Name: Si Q. Xu

\_\_\_\_\_

\_\_\_\_\_

3) \_\_\_\_\_  
Name: Mary K. Montgomery

\_\_\_\_\_

\_\_\_\_\_

4) \_\_\_\_\_  
Name: Stephen A. Kostas

\_\_\_\_\_

\_\_\_\_\_

5) \_\_\_\_\_  
Name: Lisa Timmons

\_\_\_\_\_

\_\_\_\_\_

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Pillsbury Madison & Suto LLP  
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Ninth Floor, East Tower  
1100 New York Avenue, N.W.  
Washington, D.C. 20005-3018

Atty. Dkt. PMS 256628  
M# \_\_\_\_\_ Client Ref. \_\_\_\_\_

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of U.S. Origin Patent Application  
(to Corporation)  
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WHEREAS, the undersigned, to wit:

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- 2) ~~Shen-Xu~~ Sigun Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

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and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

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Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other  
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requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,  
its successors, assigns and legal representatives.

PAT-1145 11/8/

TO 14016#5568165002# P.03

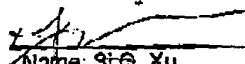
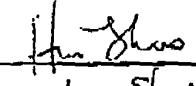
JUL 02 2003 12:47 AM FR

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|---|--------------------|---|
| 1) _____<br>Name: Andrew Fire   | _____              | _____   |
| 2)  _____<br>Name: S-G. Xu<br>Siquan | x 1/12/99          | x  _____<br>Hui Shan |
| 3) _____<br>Name: Mary K. Montgomery  | _____              | _____   |
| 4) _____<br>Name: Stephen A. Kostas   | _____              | _____   |
| 5) _____<br>Name: Lisa Timmons  | _____              | _____   |

PAT-1100 THE

TO 14016#568165002# P.04

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Ninth Floor, East Tower  
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Atty. Dkt. PMS 256628  
Mfr \_\_\_\_\_ Client Ref. \_\_\_\_\_

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TO 14016#56815502# P.05

JUL 02 2003 12:47 AM FR

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|--|--------------------|---|
| 1) _____<br>Name: Andrew Fire                              | _____              | _____   |
| 2) _____<br>Name: Si Q. Xu                                 | _____              | _____   |
| 3) <u>X Mary K. Montgomery</u><br>Name: Mary K. Montgomery | <u>X 1/29/99</u>   | <u>X Patricia Bygones</u><br><u>X 1-29-99</u> |
| 4) _____<br>Name: Stephen A. Kosias                        | _____              | _____   |
| 5) _____<br>Name: Lisa Timmons                             | _____              | _____   |

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PAT-1148 11/97

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| 2) _____<br>Name: Si Q. Xu                             | _____                | _____   |
| 3) _____<br>Name: Mary K. Montgomery                   | _____                | _____   |
| 4) <u>Stephen A. Kostas</u><br>Name: Stephen A. Kostas | <u>Jan. 20, 1999</u> | <u>Patricia L. England</u><br>Patricia L. England |
| 5) _____<br>Name: Lisa Timmons                         | _____                | _____   |



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PAT-1146 11/97

TO 14016#568165002# P.09

JUL 02 2003 12:48 AM FR

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| 2) _____<br>Name: Si Q. Xu                        | _____              | _____                |
| 3) _____<br>Name: Mary K. Montgomery              | _____              | _____                |
| 4) _____<br>Name: Stephen A. Kostas               | _____              | _____                |
| 5) <u>x Lisa D. Timmons</u><br>Name: Lisa Timmons | <u>x 1/22/00</u>   | <u>x [Signature]</u> |